

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended) A The system of claim 5 ~~for transmitting data over a physical resource, comprising: a first layer configured to manage the physical resource and to guarantee a quality of service, wherein access to the physical resource is divided into the transmission time intervals; a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded; a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of the transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and a physical layer configured to perform error correction coding or decoding of the data, wherein the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference, and wherein the second sub-layer is configured to check whether the quality of service has been complied with.~~

2. (Currently Amended) The system of claim 1, wherein the first sub-layer determines a plurality of sizes of the transmission units for the transmission time intervals and the second sub-layer selects one of the plurality of sizes according to the transmission conditions, the second sub-layer selecting a smaller one of the plurality of sizes when the transmission conditions on the physical resource are degraded.

3. (Currently Amended) The system of claim 1, wherein the first sub-layer adjusts

the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer.

4. (Currently Amended) The system of claim 3, wherein the first sub-layer reduces the size of each of the transmission units when the transmission conditions on the physical resource are degraded.

5. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a first layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein

the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a

transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

6. (Canceled)

7. (Currently Amended) The system of claim 1 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

8. (Previously Presented) A UMTS mobile telephony system using the system of claim 1.

9. (Currently Amended) The system of claim 2, wherein the first sub-layer supplies to the second sub-layer the plurality of sizes by means of a table.

10. (Currently Amended) The system of claim 4, wherein the first sub-layer adjusts the plurality of sizes of the transmission units by sending a table to the second sub-layer.

11. (Canceled)

12. (Currently Amended) A system for transmitting data over a physical resource, comprising:

a first layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over

the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein the first sub-layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer, wherein

the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference,

in the case of degradation of the transmission conditions the transmission power of a transmitter is increased so as to maintain the quality of service, and

the size of each of the transmission units is reduced when the transmission power reaches a maximum value.

13. (Canceled)

14. (Currently Amended) The system of claim 5, wherein the first layer allocates resources by ~~lowering~~ reducing the set level of a low-priority service ~~according to the inverse of a degree of priority of the service.~~

15. (Currently Amended) ~~The~~ A system of claim 11 for transmitting data over a physical resource, comprising:

a first layer configured to manage the physical resource and to guarantee a quality of service;

a first sub-layer configured to supply a transmission support in accordance with the

quality of service and to segment the data into transmission units, the first sub-layer reducing a size of at least one of the transmission units when transmission conditions on the physical resource are degraded;

a second sub-layer configured to transmit at least one of the transmission units over the physical resource during each of transmission time intervals, the transmission time interval being a periodic time interval during which the second sub-layer is allowed to access the physical resource; and

a physical layer configured to perform error correction coding or decoding of the data, wherein the first layer guarantees the quality of service by assigning a set level to the ratio of received signal power to noise plus interference, and

wherein the first layer allocates resources by ~~lowering~~ reducing the set level of a low-priority service ~~according to the inverse of a degree of priority of the service.~~

16. (Currently Amended) The system of claim 12, wherein the first layer allocates resources by ~~lowering~~ reducing the set level of a low-priority service ~~according to the inverse of a degree of priority of the service.~~

17. (Canceled)

18. (Previously Presented) The system of claim 2 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

19. (Previously Presented) The system of claim 3 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

20. (Previously Presented) The system of claim 4 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

21. (Previously Presented) The system of claim 5 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

22. (Canceled)

23. (Canceled)

24. (Previously Presented) The system of claim 12 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

25. (Canceled)

26. (Previously Presented) The system of claim 14 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

27. (Previously Presented) The system of claim 15 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

28. (Previously Presented) The system of claim 16 wherein the first layer is configured to retransmit the transmission units if acknowledgement is not received.

29. (Canceled)

30. (New) The system of claim 15, wherein the first sub-layer determines a plurality of sizes of the transmission units for the transmission time intervals and the second sub-layer selects one of the plurality of sizes according to the transmission conditions, the second sub-layer selecting a smaller one of the plurality of sizes when the transmission conditions on the physical resource are degraded.

31. (New) The system of claim 15, wherein the first sub-layer adjusts the size of each of the transmission units according to the transmission conditions and transmits the size adjusted to the second sub-layer.

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32. (New) The system of claim 31, wherein the first sub-layer reduces the size of each of the transmission units when the transmission conditions on the physical resource are degraded.